

### **REMARKS**

This paper is filed in response to the final official action dated March 25, 2008 (hereafter, "the official action"). This paper is timely filed as it is accompanied by a petition for extension of time and authorization to charge our credit card in the amount of the requisite fee. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 13-2855, under Order No. 29610/CDT320.

Claims 57-86 are pending, but claims 74, 76, and 78-86 have been withdrawn.

Claims 57, 58, 60, 62-73, 75, and 77 remain rejected under 35 U.S.C. §102(e) as anticipated by U.S. Patent Publication No. 2002/0079512 to Yamazaki *et al.* ("Yamakazi"). Claims 59 and 61 remain rejected under 35 U.S.C. §103(a) as obvious over Yamakazi in view of WO 99/49525 to Petritsch *et al.* ("Petrirsch").

By the foregoing, claim 57 has been amended. Support may be found throughout the application as filed.

The various bases for the claim rejections are addressed below in the order presented in the action. Reconsideration of the application is requested in view of the following remarks.

### **CLAIM REJECTIONS – 35 U.S.C. §102(e)**

Claims 57, 58, 60, 62-73, 75, and 77 have been rejected under 35 U.S.C. §102(e) as anticipated by Yamazaki. The applicants respectfully traverse the rejections.

Claim 57 recites a combined information display and information input device comprising a matrix of independently addressable light emitting devices and a plurality of light sensing devices, said light emitting devices comprising organic light emitting diodes comprising organic light emitting material positioned between a low work function electrode formed from a low work function material layer and a high work function electrode formed from a high work function material layer, said light emitting devices optionally further comprising a hole transporting material layer between said high work function electrode and said organic light emitting material, and said light sensing devices comprising organic photovoltaic devices comprising at least an organic electron donor and at least an organic electron acceptor positioned

between a high work function electrode formed from a high work function material layer and a low work function electrode formed from a low work function material layer, said light sensing devices optionally further comprising a hole transporting material layer between said high work function electrode and said organic electron donor and organic electron acceptor, wherein the light emitting devices and the light sensing devices are disposed on a common substrate and share the same high work function material layer, low work function material layer, and/or hole transporting material layer.

In contrast, the anodes of the light emitting devices and the light sensing devices are provided as separate layers in Yamakazi. Similarly, the cathodes of the light emitting devices and the light sensing devices are provided as separate layers in Yamakazi. This can be seen, for example, in Figure 4 of Yamakazi in which the anode 406 and cathode 408 of the photodiode 421 are formed in separate layers relative to the anode 409 and cathode 411 of the EL element 422. No hole transporting layer is explicitly identified for either device, but if present, it would also be provided in the light sensing and light emitting devices of Yamakazi as separate layers.

For the foregoing reasons, the applicants respectfully submit that the anticipation rejections over Yamakazi have been overcome and should be withdrawn.

#### **CLAIM REJECTIONS – 35 U.S.C. §103(a)**

Claims 59 and 61 have been rejected as obvious over Yamakazi in view of Petritsch. The applicants respectfully traverse the rejections.

All considered claims 57-73, 75, and 77 recite, *inter alia*, a combined information display and information input device comprising a matrix of independently addressable light emitting devices and a plurality of light sensing devices, wherein the light emitting devices and the light sensing devices are disposed on a common substrate and share the same high work function material layer, low work function material layer, and/or hole transporting material layer.

As described in the second full paragraph on page 1 of the present application, displays which require overlying layers for emission and sensing have the disadvantage that the introduction of further layers in addition to those of the display

itself adds to the complexity of the display. Additional layers also increase the thickness of the display and thereby increase light absorption within the display. These very same problems occur in the arrangement disclosed in Yamakazi.

In contrast to Yamakazi, the claimed invention provides a combined information display and information input device which retains at least one common layer in both the light emitting and light sensing devices. For example, Figures 4a to 4g of the present application, illustrate an embodiment wherein anode layer 402, cathode layer 408, and hole transport layer 405 are shared by both the sensing and emitting devices. Although the sensing and emitting devices may use a different hole transport material (as illustrated in Figure 5c(ii)) or a different electrode layer(s), for example, it is often not necessary to change all the layers of the different devices. As such, it is advantageous to provide the two different sensing and emitting devices on a common substrate surface even when certain different layers are used for the sensing/emitting devices because if certain layers can be made of the same material while still obtaining good sensing/emitting functionality then these common layers can advantageously be deposited in a single deposition step.

In contrast, the sensing and emitting devices in Yamakazi are disposed on different layers and manufactured in separate and distinct processes. Accordingly, the claimed invention is neither disclosed nor suggested by Yamakazi.

Petritsch was merely cited for its disclosure of organic electron donors and organic electron acceptors and thus adds nothing further to the above analysis.

In view of the above, the applicants respectfully submit that a *prima facie* case of obviousness cannot be established, and the rejections of claims 59 and 61 as obvious over Yamakazi in view of Petritsch should be withdrawn.

**CONCLUSION**

Should the examiner wish to discuss the foregoing, or any matter of form or procedure in an effort to advance this application to allowance, he is respectfully invited to contact the undersigned attorney at the indicated telephone number.

Respectfully submitted,

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